

UPM RAFLATAC  
**CLIMATE  
REVIEW**  
2022

# Contents

<b>Creating a smarter future beyond fossils – together</b>	<b>3</b>
<b>UPM Raflatac’s ambition</b>	<b>4</b>
<b>We act through forests and land</b>	<b>5</b>
SUSTAINABLY MANAGED FORESTS CURB CLIMATE CHANGE AND DEFORESTATION	6
ON THE VERGE OF ACHIEVING 100% CERTIFIED PAPERS	7
<b>Efficiencies and sustainable choices help reduce emissions</b>	<b>8</b>
UPM REQUESTS EMISSIONS DATA FROM ITS SUPPLIERS	9
SCARBOROUGH FACTORY TAKES STEPS TOWARDS SUSTAINABILITY	10
<b>We act through products and services</b>	<b>11</b>
IMPACTFUL CLIMATE ACTION THROUGH PRODUCT INNOVATION AND COLLABORATION	12
LINERLESS PRODUCT RANGE NOW CERTIFIED CARBONNEUTRAL®	13
THERMAL LABELS WITH 100% RECYCLED FIBERS	13
CHOOSING RAFNXT+ HELPS CUT AND AVOID CARBON EMISSIONS	14
TOWARDS A CIRCULAR ECONOMY WITH RECYCLING-COMPATIBLE LABEL MATERIALS	15
LABEL LIFE HELPS MAKE LIFE CYCLE DECISIONS	16
RAFCYCLE TURNS LABEL LINER WASTE INTO NEW MATERIALS	17
<b>Every day is a day to act, and it is urgent!</b>	<b>18</b>

# About Climate Review

This Climate Review is a compilation of UPM Raflatac’s climate news and insights on our journey beyond fossils. The progress reviewed includes UPM Raflatac factories as of 1.1.2022. Scope 1, 2, and 3 information has gone through limited assurance process as a part of the UPM carbon inventory 2022. External verifications and collaborations are mentioned where relevant.



# Creating a smarter future beyond fossils – together

**AT UPM RAFLATAC**, our ambition is to be the world's first label materials company beyond fossils. In 2021, we set ourselves ambitious targets to accelerate our journey towards this goal.

In practice, this means increasing the use of certified papers and traceability of other biobased materials, working at our factories and with our suppliers to reduce greenhouse gas emissions, and developing innovative products and services that help brand owners take climate action and meet their own climate goals.

2022 was a year of good results. For example, in APAC we achieved almost 100% share of FSC™ certified papers<sup>1</sup>, we implemented several energy efficiency actions at our factories, and our Direct Thermal Linerless product range was certified as a CarbonNeutral® product (not including use) by Climate Impact Partners in accordance with The CarbonNeutral Protocol.

UPM is among the first forest industry companies committed to the UN Business Ambition for 1.5°C and to taking tangible actions to mitigate climate change. UPM has also joined The Climate Pledge which commits the company to achieving net-zero annual carbon emissions by 2040 – a decade ahead of the Paris Agreement's goal of 2050.

On our journey beyond fossils, we at UPM Raflatac aim to reduce our dependency on virgin fossil sources of carbon through our Reduce, Recycle, Renew, and Reuse approach. Our over 3,000 sustainability ambassadors working in sourcing, product development, operations, logistics, marketing, and sales, to name a few, support us on our journey to become the first label materials company beyond fossils.

We want to take an active role in driving change and to collaborate with our value chain partners to reach the highest possible positive impact on climate and people. We are working together with multiple organizations, such as the Carbon Trust and Climate Impact Partners, to verify our climate impacts.

Ultimately, we want to be a part of the solution to the climate crisis. Together with our customers, suppliers, and partners, we are taking climate action and working towards creating a smarter future beyond fossils.

## **ANTTI JÄÄSKELÄINEN**

Executive Vice President,  
UPM Raflatac

<sup>1</sup> FSC C012530

# UPM Raflatac's ambition

The world's first label materials company beyond fossils

## FORESTS AND LAND

We increase the use of certified papers

We increase the traceability of biobased materials

## EFFICIENCY AND EMISSIONS

We improve the energy efficiency of our factories

We switch to renewable energy when possible

We work with our suppliers to reduce the CO<sub>2</sub> emissions of our supply chain

## PRODUCTS AND SERVICES

We strive to reduce the dependence on virgin fossil feedstock

We innovate beyond fossils products

We design more sustainable alternatives for the packaging industry

We develop and offer climate and circular services

Our ambition is to be the world's first labels materials company beyond fossils. To make this vision a reality, our climate actions are based on three focus areas: forest and land, emissions and efficiency, and products and services. With these focus areas, we aim to reach the climate targets we have set for ourselves for 2030.

# We act through forests and land

We at UPM Raflatac are dependent on well-managed forests and land. We strive to take care of these valuable resources as they ensure our business continuity as well as help mitigate climate change and benefit the whole environment and society.

A high proportion of our label materials include certified sustainable paper face or release liner materials. Our goal is to have 100% of our paper raw materials certified by 2030, and by the end of 2022, we had already reached 79%. Our operations carry FSC™ (FSC C012530) and PEFC (PEFC/02-31-196) chain of custody certifications.

As the demand for renewable solutions grows, so does the need to ensure the sustainable origin of biobased raw materials. In addition to striving towards 100% certified papers, we also aim at having 100% of the other biobased materials traceable by 2030.

To reach this goal, we work together with our suppliers to further increase the transparency of the value chain to be able to assess the sustainability of the biobased raw materials.

With the traceability of biobased materials, we strive to confirm that the material originates from responsible sources that do not contribute to deforestation. The other biobased materials include different types of tackifiers, alternative fibers, natural latex, and biobased films. In 2022, half of these biobased raw materials were traceable.

## What is FSC?

The Forest Stewardship Council™ (FSC™) is a global, not-for-profit organization dedicated to the promotion of responsible forest management worldwide. FSC defines standards based on agreed principles for responsible forest stewardship that are supported by environmental, social, and economic stakeholders.

## What is PEFC?

PEFC, the Program for the Endorsement of Forest Certification, is a global alliance of national forest certification systems. As an international non-profit and non-governmental organization, PEFC is dedicated to promoting sustainable forest management through independent third-party certification.

## Facts & figures in 2022

Paper raw materials certified

**79%**

Traceability of other biobased materials

**50%**

## Forest & land climate targets for 2030

Paper raw materials certified

**100%**

Traceability of other biobased materials

**100%**



Read the original story:

[Sustainably managed forests will be key in curbing climate change and deforestation](#)

## Going beyond fossils

# Sustainably managed forests curb climate change and deforestation

Nearly a third of the global land surface is covered by forests. Forestlands are important in the fight against climate change as they store carbon in their trees and soil. Simply put, removing forests would be disastrous for the planet.

Through its products and services, UPM Raflatac is a strong promoter of the sustainable use of forests and land. Well-managed forests and land absorb CO<sub>2</sub> from the atmosphere and store it in their biomass, so increasing the capacity of forests as carbon sinks is one of the key aspects of keeping global warming limited to 1.5°C.

As we move beyond fossils, our focus is on both land and forests as sources of various biobased raw materials.

“Forests are the source of renewable biobased raw materials, but it is also important to understand the entire carbon cycle, including the effects on carbon sinks. We rely on credible certified fiber sources such as FSC to verify carbon sinks are managed effectively,” explains **Robert Taylor**, Director, Sustainability, UPM Raflatac.

The most significant climate impact of a label’s life cycle comes from the choice of raw materials. This is why wood fiber and other biobased materials play an important role in our products.

“This also means we need to be efficient and optimize our processes to use as little wood fiber as possible. This has a knock-on effect of reducing the pressure on forests and logging.”

## Certifying the future

**Janne Näräkkä** has worked for the past six years with the Forest Stewardship Council. He currently represents four large forest companies on the board of FSC and has the position of Director of FSC Certification at UPM Forest North Europe.

A forest that gets awarded with an FSC certificate needs to meet various environmental, economic, and social criteria.

Well-managed forestlands are essential in fighting global warming through carbon sequestration and storing. The problem globally is that many countries lack the legislative tools to ensure that forests are maintained as forests and managed in a sustainable way.

“By increasing the demand of certified raw materials such as certified wood fiber, it is possible to contribute to better forest management and also promote climate-positive forestry,” explains Näräkkä.

## Climate ambition in action

# On the verge of achieving 100% certified papers

The UPM Raflatac Asia-Pacific team has been a real changemaker in achieving the company's climate ambition and currently holds the highest share of FSC-certified paper used – nearing a full 100%. How did they manage to achieve this?

"In the early stages of our ambitious project in 2018, the share of FSC-certified fiber used in our paper products was below 40%. In only 18 months, we managed to increase it all the way to 94%. The aim is to reach a full 100% in the very near future," says **Juan-Manuel Lopez Ruiz**, Director, Paper Laminates, APAC.

The whole Asia-Pacific organization, from sourcing to sales, strongly engaged in this transformation journey. The smooth delivery of the many-sided project can be attributed to the commitment of the entire team. All team members pulled together with amazing enthusiasm, making it their common goal.

### Wide scope of delivery

"After drilling down to the actions needed to fulfill our sustainability promise and analyzing the impact of the changes on our business, we realized that it would shake all the pillars of the company. This was combined with the reality that we live in the Asia-Pacific, where countries have widely differing regulations and geopolitical cultures," Ruiz says.

Although sustainability has taken hold across the world, it is important to find the local angle.

Alignment and commitment played an important part in getting everyone involved, and we also got a lot of support from the management. But most importantly, the strong engagement of our people was the key to success.

"Also, it was crucial that the front-end sales team understood why we were doing this and how it should be communicated to the customers."

### Full transparency expected

The focus now is on consumers and meeting their needs. Ruiz says that all products have been designed based on the FSC certification since 2018. It is also important to find the additional sustainability features that can further differentiate UPM Raflatac.

Nowadays, consumers expect full transparency; the ones in East and Southeast Asia are no exception.

"Thanks to our journey, we have established ourselves as the go-to company in the region, with certification systems that allow us to ensure that our fiber sourcing has no links to historical deforestation."

The response from the customers has been very welcoming. Many companies are looking for ways to protect their brand and seek suppliers with credible validations that can be passed on to the end-users.

"Our current spearhead product **RAF NXT+** is FSC certified but it is also the world's first label material verified by the Carbon Trust to help mitigate climate change. Now that these labels are also available as carbon neutral, we have taken one more step towards a future beyond fossils."



# Efficiencies and sustainable choices help reduce emissions

At UPM Raflatac, we are taking concrete steps to reduce greenhouse gas emissions from our operations and value chain.

## Scope 1: efficiencies in our facilities

Scope 1 emissions include emissions that emanate directly from our facilities, mainly caused by on-site combustion of fuels like natural gas. Actions taken in many of our facilities to reduce fuel use and Scope 1 emissions include:

- better management of heated air by recirculating it when possible
- insulating process equipment to minimize heat loss or gain associated with heated and cooled air and fluids
- improving insulation in our facilities to reduce fuel use and make them more comfortable
- fine-tuning of combustion units to increase fuel use efficiency.

## Scope 2: sustainable energy choices

Scope 2 emissions are those associated with purchased electricity. In 2022, five of ten factories used 100% renewable electricity. Although renewable electricity contracts have a significant impact on our greenhouse gas footprint, we have also taken energy efficiency actions. They include:

- retrofitting facilities with LED lighting
- installing motion sensors to control lighting
- setting temperature set points to control the amount of energy used to heat and cool facilities
- installing energy monitoring systems to accurately identify where energy leaks are occurring, so they can be mitigated or fixed.

Our aim is to reduce Scope 1 and 2 greenhouse gas emission intensity by 65% by 2030 from our 2015 baseline.

## Scope 3: working with our suppliers

Scope 3 emissions come from the value chain before and after a company's operations, such as greenhouse gas emissions attributable to raw materials, transportation, secondary processing, and end-of-life management.

We work with our suppliers to reduce our Scope 3 emission intensity by 30% by 2030 from the 2018 baseline. Our primary focuses in Scope 3 are the emissions related to raw materials and transportation. UPM Raflatac participates in the UPM group wide -30 by 30 program that aims to reduce emissions from the most significant sources in our value chain. In the current, early phases of the program, we will focus on collecting emissions data and determining an accurate baseline for the products and services we purchase from our partners. In the long run, we aim to profoundly change the way decisions are made in our procurement and product development.

### EMISSION SCOPE CATEGORIZATION:

**Scope 1:** Emissions caused by company's own actions, mainly from energy generation.

**Scope 2:** Emissions caused by purchased energy: power, steam, heating, and cooling.

**Scope 3:** Emissions from value chain before and after the company's own operations, such as purchased goods, transportation, further processing, and end-of-life.

## Progress in 2022

Scope 1 & 2 emissions, per million m<sup>2</sup> produced (compared to 2015 baseline)

**-34%**

Scope 3 emissions, per million m<sup>2</sup> produced (compared to 2018 baseline)

**-1%**

## Emission reduction and efficiency targets for 2030

Scope 1 & 2 emissions, per million m<sup>2</sup> produced (compared to 2015 baseline)

**-65%**

Scope 3 emissions, per million m<sup>2</sup> produced (compared to 2018 baseline)

**-30%**

## Climate ambition in action

# UPM requests emissions data from its suppliers

UPM has ambitious emissions reduction targets in its own operations, but now we have also kicked off the -30 by 30 program to decrease our value chain emissions.

### Value chain biggest source of emissions

Calculating the carbon footprint of a UPM product can take anywhere from a couple of weeks to several months. The more complex the product, the more information is needed to understand its environmental impacts.

These impacts are often indirect and quite significant. For many companies, 65–95% of their carbon footprint is generated in the value chain. In UPM Raflatac, emissions from raw materials and transportation cover approximately 90% of the products' cradle-to-gate emissions.

That is why collaboration with suppliers and partners plays a key role in reaching our targets. The -30 by 30 program will help us engage them in the climate work we do and make it possible to cut our value chain emissions by 30 percent from 2018 levels by 2030.

The work starts with the systematic collection of emissions data from the suppliers that UPM Group has in its network. This is a major effort considering the variety of business activities and sizes represented by UPM's partners globally.

Requesting and collecting carbon footprint data from suppliers will give us a solid foundation for monitoring and reducing emissions in our value chain. There are many means for reducing emissions, and the low-hanging fruits include energy and operational efficiency as well as technology-related improvements.

### The positive climate impact of -30 by 30

The program decreases UPM's negative impacts and increases positive impacts on the climate. Our climate commitments guide us to continuously improve our own operations. It already shows how we manage forests, innovate products, and reduce emissions.

During the first phases of -30 by 30, we will focus on collecting emissions data and determining an accurate baseline for the products and services we purchase from our partners. In the long run, we aim to profoundly change the way decisions are made in our procurement and product development.

For example, procurement decisions are still largely made based on quality, delivery time, and monetary value. We want to make climate a key consideration in selecting suppliers and partners, as well as in developing our product portfolio.

As a result, this will encourage us, our customers, and our entire value network to develop and choose more sustainable solutions. This will increase our positive climate impact permanently.

## UPM's climate commitments by 2030



Take tangible actions to limit global temperature rise

# 1.5°C



Reduction of CO<sub>2</sub> emissions of our supply chain

# -30%



Reduction of CO<sub>2</sub> emissions from own energy generation and purchased energy

# -65%



Climate-positive land-use and product portfolio

# +

Read the original story:

[UPM is kicking off the -30 by 30 programme](#)



## Climate ambition in action

# Scarborough factory takes steps towards sustainability

The employees of the UPM Raflatac Scarborough site actively contribute to the company's goal of being the world's first label materials company beyond fossils. In addition to operational efficiency initiatives, the Scarborough factory transitioned to renewable electricity already during 2021.

### Passion for the environment

The environmental impact of operations is taken seriously at the Scarborough site. The current factory climate roadmap has been developed together with employees, and it includes various operational efficiency initiatives to reduce emissions.

"The vast majority of the ideas have come from a local sustainability team who have been talking to employees, such as core and consumable recycling options and green walks. It really isn't just top-down initiative but very much bottom-up as well," says **Shaun Johnson**, General Manager, Scarborough factory.

"Our team is passionate about the environment and want to get involved in the sustainability projects we are doing. These vary from installing light sensors to conducting electricity audits," adds **Richard Wallace**, the Safety and Environmental Manager.

### Inspiration from sister factories

In changing renewable energy, the Scarborough team was first inspired by sharing best sustainability practices with colleagues from sister factories, such as Nancy in France. Some had already transitioned to renewable electricity.

"The option has become more widely available in the UK market, and in 2021 our energy provider was able to supply us with a new source of energy," explains Johnson.

"So we decided to make the switch. All of the site's electricity now comes from a combination of wind and solar."

The tangible reductions achieved by the transition are shared with employees every month. Regular discussions on lessons learnt with sister factories also propel further inspiring ideas.

# We act through products and services

Sustainable products and services play a significant role in the fight against climate change. We offer our customers future-proof products and services that enable them to take climate action and support circular economy. We strive to increase the share of renewable and recycled raw materials in our products and to reduce dependence on virgin fossil resources. This is what we call a future beyond fossils.

## Innovative and smart products

Our SmartChoice™ and SmartCircle™ are product portfolios to enable smart label material choices. Both are built to support the sustainability targets of Reduce, Renew, Recycle and Reuse.

With SmartChoice products, our customers can, for example, choose label materials that are resource-optimized and so decrease their environmental impact and reduce the strain on natural resources. These products also help customers reduce the use of virgin feedstocks by shifting to label materials that include recycled materials, or they can move beyond fossils by choosing label materials made with verified sustainable and renewable resources.

The SmartCircle products support circular economy by enabling customers to choose label materials that enhance packaging recyclability or allow for reuse.

### Read more:

[Label Life, Label Life service | UPM Raflatac](#)

[RafCycle, RafCycle™ recycling services | UPM Raflatac](#)

## Services underpin product choices

Our sustainability services complement our product portfolio. They help our customers reduce their fossil carbon emissions from label materials as well as support circular economy.

With Label Life by UPM Raflatac service, our customers can evaluate the labels we offer and compare the environmental impact of alternative options. Label Life is based on Life Cycle Assessment (LCA), a scientific method for analyzing the environmental impacts of products.

Our RafCycle™ recycling service allows our customers to close the recycling loop and support circular economy by collecting and recycling the release liner-waste.



### REDUCE

Lower your environmental impact and reduce the strain on natural resources by using label materials that are resource-optimized.



### RECYCLE

Reduce the pressure on using virgin feedstocks by shifting to label materials that include recycled materials.



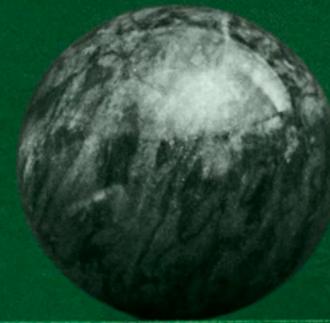
### RENEW

Move beyond fossils by choosing label materials made with verified sustainable and renewable resources.



### RECYCLING & REUSE

Promote circular economy by choosing label materials that support recyclability or allow for reuse, enabling recyclable packaging.





Read the original story:

[Impactful climate actions are achieved through innovative products and collaboration](#)

## Going beyond fossils

# Impactful climate action through product innovation and collaboration

Packaging labels are the single most critical driver of packaging brand experience, making people fall in love with the product, recognize it, and return to it. But packaging labels can also be change agents, capable of transforming the sustainability of the product and how millions of people consume worldwide.

Merely switching label materials might not feel like much, but when it is multiplied by millions of packages worldwide, the impact becomes monumental. The world needs more sustainable labeling solutions. Every choice made by producers and brands alike has the power to change the future of our planet.

At UPM Raflatac we want to help brand owners to become changemakers and make more sustainable choices.

To start with, we promote the switch to more sustainable labeling solutions by choosing our renewable, recycled, and reduced alternatives.

As the next step, we encourage brand owners to close the material loop by choosing labeling materials that support packaging recycling and ensure the circularity and reuse of the packaging.

**Timo Kekki**, Head of Global Films and Specials business at UPM Raflatac, is confident we are on the right track and making good headway in switching from fossil-based carbon to renewable and recycled raw materials and from a linear to a circular economy.

"A radical change will be happening in the packaging industry in the next five to ten years. As the industry is growing, the need for more [sustainable labeling](#) also increases," he says.

We are speeding up this development by continuously raising the number of biobased and recycled content packaging solutions on the market. In addition, we continue developing innovative label solutions that enhance the recyclability of the primary package. This is what we call the [Switch and Loop approach](#).

"From a climate perspective, we are in a unique position to provide our customers and brand owners with innovative solutions that help them meet their climate targets. UPM Raflatac [ForestFilm™](#), [RAF NXT+](#), [Linerless](#), [RafCycle™](#), and [Label Life](#) are examples of products and services we have already launched to help our customers reduce their climate impact," says Kekki.

"We believe we will be able to grow the number of biobased and recycled raw materials faster than an average producer and offer these solutions to our partners. This will speed up the change in the industry further and raise the demand for our products."

## Climate ambition in action

# Linerless product range now certified CarbonNeutral®

We extended our CarbonNeutral® product portfolio in May 2022 by achieving CarbonNeutral product certification for the whole Linerless product range.

The certification was issued by Climate Impact Partners in accordance with [The CarbonNeutral Protocol](#). The leading global framework provides a robust and pragmatic blueprint for carbon neutrality.

Our Direct Thermal (DT) linerless labeling products help customers reduce their packaging footprint. The sustainability and efficiency benefits of using linerless are significant as it reduces material usage by up to 40% compared to traditional labeling technologies.

The carbon footprint of our linerless products had already been verified by the Carbon Trust. The CarbonNeutral® certification is further proof of the actions we are taking to define, measure and reduce emissions for CarbonNeutral products. Furthermore, the emissions still unavoidable today are now compensated.

In 2022, the cradle-to-customer carbon footprints of Linerless products were compensated through projects that were verified to internationally recognized standards, such as the Gold Standard.

### Read the original story:

[UPM Raflatac extends its CarbonNeutral® product portfolio – the whole Linerless product range is now certified as a CarbonNeutral® product](#)

## Collaborations

*Collaborations help widen our horizons and aim higher in our climate actions. We actively drive the change together with credible partners and organizations. We are working with organizations like the Carbon Trust and Climate Impact Partners to create more sustainable labeling materials for various end uses globally.*

The **Carbon Trust** is a global climate consultancy driven by the mission to accelerate the move to a decarbonised future. It has been pioneering decarbonisation for more than 20 years for businesses, governments, and organisations around the world.

**Climate Impact Partners** delivers high-quality solutions for action on climate change. It believes carbon markets have a critical role in helping companies like ours tackle climate change by putting a price on carbon emissions and funding carbon reduction and removal activities. We are proud to join the world's leading companies and project partners in working with Climate Impact Partners to transform the global economy, improve health and livelihoods, and restore a thriving planet.

## Climate ambition in action

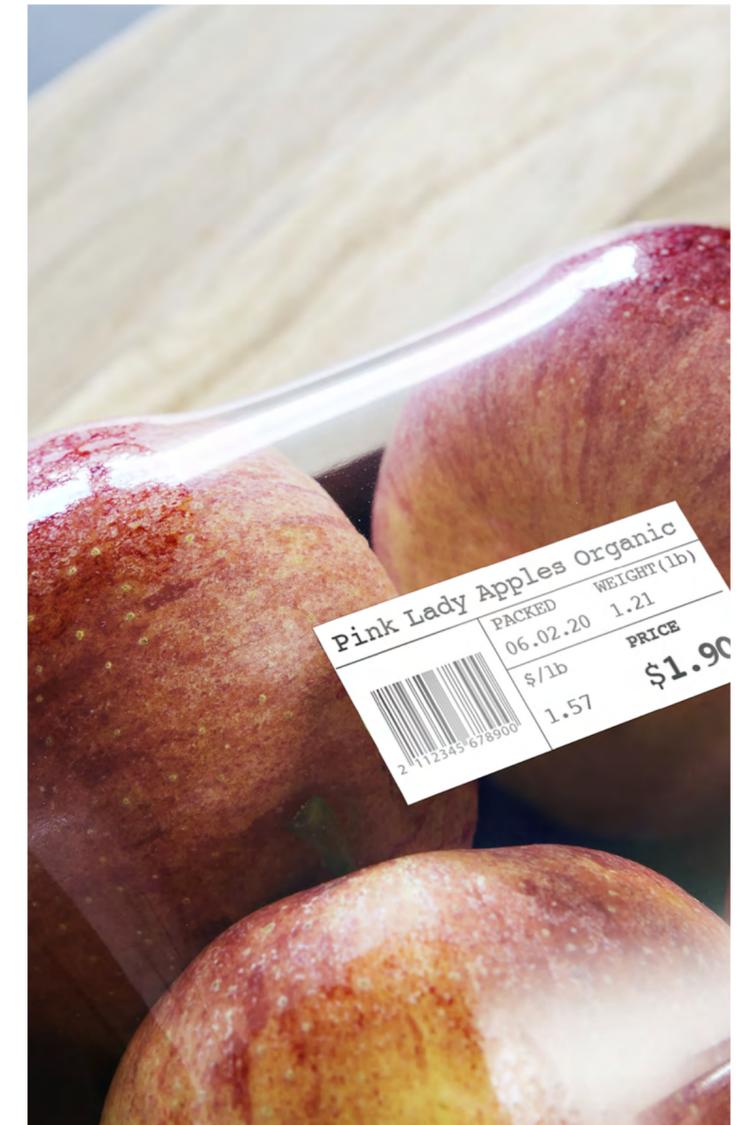
# Thermal labels with 100% recycled fibers

We support our customers and brand owners in meeting their climate targets through our innovative and sustainable labeling solutions. We were the first company to launch Total Phenol Free thermal paper labels made with 100% recycled fibers onto the market.

Thermal paper label products made with 100% recycled fibers are FSC Recycled certified and are the ideal solution for anyone who wants to stretch sustainable packaging to the maximum. They are also a perfect fit for our customers and brand owners with ambitious sustainability goals.

Even though our FSC Recycled certified thermal paper labels are made from recycled raw materials, their quality has not been compromised. Switching to these labels offers a host of sustainability benefits for both the brand owners and the environment, without any changes needed in the printing or labeling process.

As a high-end product, thermal labels complement our FSC certified product offering. By using recycled fibers whenever possible, we can leave virgin wood to be used in even more demanding applications.



## Climate ambition in action

# Choosing RAFNXT+ helps cut and avoid carbon emissions

RAFNXT+ is a prime example of how UPM Raflatac provides products that help customers take climate action and keeps developing solutions that meet the needs of sustainably minded brands and companies.

“RAFNXT+ range helps brands and customers to reduce label-related emissions already today. RAFNXT+ is an expanding and already existing alternative for standard label materials in end uses such as food, logistics, retail, and wine,” says **Satu Leppänen**, Sustainability Manager, UPM Raflatac.

### Over 5,000 tons of emissions avoided

On average, RAFNXT+ products have 11% lower carbon footprint compared to standard label materials. The lower carbon footprint of the RAFNXT+ products relative to our standard products has enabled us and our customers to avoid a total of over 5,000 metric tons of GHG emissions in 2022 compared to emissions from respective standard products for the same volume.

RAFNXT+ label products have been designed to use natural resources in a smarter way. They enable a superior carbon performance compared to standard labels through the product design's smarter use and choice of natural resources.

Smart design also covers the choice of resources. The paper label materials are FSC-certified (FSC™ C012530) and sourced from sustainably managed FSC-certified forests, recycled materials and other controlled sources.

In addition to having a smaller carbon footprint, choosing RAFNXT+ over standard label material has a quantified positive impact on the source forests' increased capacity to remove carbon dioxide from the atmosphere.

### Validated impact

To validate the positive impact of choosing RAFNXT+ products, in 2019 it became the world's first label material verified by the Carbon Trust to help mitigate climate change.

The Carbon Trust has verified our science-based approach to quantifying and calculating the positive impact of choosing RAFNXT+ instead of standard label materials.

The scope of the calculation is cradle-to-gate, and it is based on our LCA study, which has been critically reviewed according to the ISO 14040/44 and additionally verified against the PAS 2050 standards.

Since 2019, the RAFNXT+ portfolio has been extended steadily; nowadays it includes hundreds of products for a wide range of different end uses.



Read more:

[Positive climate action with RAFNXT+ labels | UPM Raflatac](#)



## Climate ambition in action

# Towards a circular economy with recycling-compatible label materials

Packaging waste continues to pose a significant environmental challenge. The importance of recyclable packaging cannot be overstated as it can help reduce the need for virgin fossil raw materials and keep the valuable raw materials in the cycle, and so cut the packaging value chain carbon emissions.

To support businesses in making informed choices, external recognitions and approvals have emerged as valuable tools. These provide a way to identify and promote packaging and packaging components that are designed for recycling.

The label material choice plays a critical role in enhancing the recyclability of any packaging. Over the years, we have been determined to develop both filmic and paper label solutions that enhance recycling and reuse of different types of packaging.

In 2022, our SmartCircle™ portfolio received approvals and recognitions from several organizations that facilitate the transition toward a circular future. These include:

- [European certifications of recyclability from Institut cyclos-HTP for PET and HDPE packaging](#)
- [RecyClass recognitions for pressure sensitive labels for PP and HDPE container recycling](#)
- [APR recognition for PP pressure-sensitive labels with acrylic adhesive for PP bottle recycling](#)

By promoting the use of packaging materials designed for recycling, these organizations foster a circular system where packaging waste is minimized and materials are continually repurposed.

### Building trust and transparency

The approvals and recognitions act as trusted external verifications and provide reassurance to our customers and brand owners that our label materials meet the specific recycling criteria and do not hinder the recycling process or impair recyclate quality.

Widely accepted approvals and recognitions allow businesses to adopt sustainable packaging designs and choose materials that enhance recycling. This ultimately contributes to reducing waste and keeping valuable raw materials in the recycling loop for longer. The choice of recycling-compatible labels has the potential to contribute to climate change mitigation through increasing the recycling yield and so lowering environmental impacts.

## Climate ambition in action

# Label Life helps make life cycle decisions

Today, the ability to measure the environmental impact of products is crucial. Verified data is the backbone of making decisions relevant for sustainable transformation. Also, without data, it is impossible to make environmental claims that are specific, transparent, and credible.

### Tool for comparing environmental impacts

Label Life by UPM Raflatac is a comprehensive Life Cycle Assessment (LCA) service which relies on a standardized method for analyzing the environmental impacts of our label products. Our service is based on UPM Raflatac's externally verified LCA study, which was performed based on the principles laid out in ISO 14040/44 and PAS 2050 standards.

Through the service, our customers can get LCA calculations of three fundamental metrics: greenhouse gas emissions, energy demand, and water consumption. Today, these calculations are mostly done cradle-to-gate. Calculations using other life cycle indicators as well as cradle-to-grave calculations are available via our tailored Label Life service.

In addition, Label Life enables comparisons of product alternatives from our portfolio as well as various end-of-life scenarios for the release liner.

"A credible Life Cycle Assessment service is at the core of sustainable product development and sustainable product marketing. It is the engine that generates the information about the environmental impacts for specific products and offers arguments for making the switch to more sustainable alternatives," says **Flora D'Souza**, Manager, LabelLife, UPM Raflatac.

Built on top of a life cycle model of labelstock, Label Life is a repository of environmental footprints of our products and a tool for comparing them in terms of key environmental indicators.

"When we recommend our customers to choose lower impact products and save on carbon, energy, and/or water, it is Label Life that we rely on."

### Expanding service scope

Label Life as a service was first introduced in 2013. The service has since been developed to include a broad range of UPM Raflatac products from paper-based to fossil-based materials and even extended to bioplastics and recycled materials.

In 2022 we continued to develop Label Life by adding our latest sustainable labeling products to the scope of the service. These include the complete Direct Thermal linerless label portfolio, all the products certified as CarbonNeutral® by Climate Impact Partners, and carbon footprints of our Ocean Action label material.

Today, the LCA calculations made with Label Life cover over 90% of our sales volume. The usage of the service has also grown significantly over the years.

"Label Life comparisons are being made on a daily basis across the globe. This is a clear sign that our customers are seeking our support in finding more sustainable products. Label Life helps them make the switch, because they can rely on data to underpin their choices," D'Souza says.



# Label Life

Read more:

[Label Life service | UPM Raflatac](#)



Read more:

[RafCycle™ recycling services | UPM Raflatac](#)

## Climate ambition in action

# RafCycle turns label liner waste into new materials

In the process of product labeling, the label release liner is a waste stream that is often overlooked. With our RafCycle recycling service, our customers can turn their label liner waste into new raw materials.

### More RafCycle partners

The RafCycle by UPM Raflatac recycling service was first introduced in 2010. Back then, circular solutions were underdeveloped, and we wanted to be a part of the solution by offering our customers a way to recycle their liner waste.

Over the years, the whole labeling industry has started to understand the importance of resource efficiency and the need to move from linear to a more circular economy.

“The biggest achievement for RafCycle in 2022 was that we raised the number of RafCycle partners from around 300 to a milestone 400 at the end of the year. During the year, we also took big steps to increase the PET liner recycling capabilities and increased our overall RafCycle capabilities in the Americas,” says **Juha Virmavirta**, Director, RafCycle, UPM Raflatac.

Recycling the label waste through our service is simple. Our RafCycle partners collect the label liner waste, we arrange a pickup for the waste and handle its transformation into new label materials, paper or PET products, or other circular solutions.

### Avoiding tons of emissions

Release liner recycling helps cut down emissions. According to calculations made with the Label Life by UPM Raflatac Life Cycle Assessment tool, a company that recycles approximately 100 metric tons of paper release liner avoids

- 22 metric tons of fossil CO<sub>2</sub>e emissions compared with incineration or
- 162 metric tons of fossil CO<sub>2</sub>e emissions compared with landfill.

### With the same amount of PET liner waste the numbers are

- 362 metric tons of fossil CO<sub>2</sub>e emissions avoided compared with incineration or
- 215 metric tons of fossil CO<sub>2</sub>e emission avoided compared with landfill.

### More hard work ahead

“2022 was a year of a lot of hard work and determination to promote circular economy and positive climate impacts through label release liner recycling,” Virmavirta says.

Despite the positive progress made with the RafCycle service and within the industry, there is still a lot of work to be done.

“During the years we have developed our RafCycle service in collaboration with our partners, and we see that the companies can easily implement our service. This means that the positive climate and business impacts can be achieved with acceptable efforts,” Virmavirta says.

# Every day is a day to act, and it is urgent!

**TO ACHIEVE OUR** ambition of being the world's first label materials company beyond fossils, we have been developing our activities in three areas – forest and land, emission reductions and efficiencies, and products and services – for several years already. Having clear 2030 targets enables us to determine our focus areas and ensures the whole organization is working towards the same goals.

In an organization of over 3,000 people who serve customers with multiple diverse end-uses, the key is that the whole organization understands the task at hand as well as its urgency and commits fully to the targets.

This is crucial because, after all, our employees are the ones doing the work and making the decisions to fulfill our climate commitments and achieve our ambition.

2022 was a year of planning, setting up our way of working, and building capabilities across the organization. It was also a year of great results described in this Review. It was a good starting point for our journey forward.

Still, many questions remain about how we can reach our 2030 targets. For example, we need to continuously develop collaboration and data collection with our suppliers to get Scope 3 data from them. We can use the data in developing future lower carbon footprint products, including identifying new bio-circular feedstocks that will be the foundation of our Beyond Fossils approach.

We also need to identify new technologies that will reduce energy and fuel consumption in operations and supply chains. We have big challenges and plenty to do.

At the end of the day, however, the ambition to fulfill our climate commitments and reach our 2030 targets will be built on collaboration: collaboration with our suppliers, customers, and brand-owners as well as with all UPM Raflatac employees who are finding solutions, innovating, and making decisions daily to help reach our targets and overall ambition.

2022 was the beginning of the journey towards the 2030 targets and until we reach the targets, every day is a day to act.

## **ROBERT TAYLOR**

Director, Sustainability,  
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**UPM**RAFLATAC

